

ABSTRACT OF THE DISCLOSURE

Method of forming an outwardly grown aluminide diffusion coating on a superalloy substrate disposed in a coating retort including the steps of heating the substrate to a temperature of 900 to 1200 degrees C, flowing a coating gas comprising aluminum trichloride and a carrier gas through the coating retort at a flow rate of the coating gas of about 100 to about 450 standard cubic feet per hour, providing a concentration of aluminum trichloride in the retort of
10 less than 1.4% by volume of the coating gas, and providing a total pressure of the coating gas in the coating retort of about 100 to about 450 Torr.

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